Amendments to the Claims:

The following listing of claims replaces all prior versions and listings of the claims in this application.

Listing of the Claims:

Claim 1 (Currently Amended): A process for producing an aliphatic polyester by subjecting a cyclic ester to bulk ring-opening polymerization, which comprises

i) providing a cyclic ester purified to the extent that a water content is at most 50 ppm, an α-hydroxycarboxylic acid content is at most 100 ppm, and linear α-hydroxycarboxylic acid oligomers content is at most 1,000 ppm,

ii) controlling an overall proton concentration in a ring-opening polymerization system by adding a molecular weight control agent consisting of water to the cyclic ester to control the overall proton concentration in the cyclic ester to be within a range of higher than 0.09 mol% but lower than 2.0 mol%, wherein the overall proton concentration in the cyclic ester is calculated out on the basis of the total amount of hydroxycarboxylic compounds consisting of the α-hydroxycarboxylic acid and the linear α-hydroxycarboxylic acid oligomers as impurities in the cyclic ester, water contained as impurities in the cyclic ester, and water added to the cyclic ester, and

iii) subjecting the cyclic ester to ring opening polymerization in the closed state and in the presence of a ring-opening polymerization catalyst,

thereby controlling melt viscosity of the resulting aliphatic polyester, wherein the resulting aliphatic polyester has a melt viscosity of 50 to 6000 Pa·s as measured at a temperature of 240°C and a shear rate of 121 sec^{-1}.

Claims 2-3 (Cancelled).

Claim 4 (Original): The production process according to claim 1, wherein the overall proton concentration of the impurities contained in the purified cyclic ester before the addition of water is within a range of 0.01 to 0.5 mol%.

Claims 5-6 (Canceled).

Claim 7 (Previously Presented): The production process according to claim 1, wherein when water is added to the purified cyclic ester to control the overall proton concentration in the cyclic ester, the amount of water added to the cyclic ester is controlled on the basis of a relational expression between a predetermined overall proton concentration in the cyclic ester and a melt viscosity value to be controlled so as to give an overall proton concentration corresponding to a targeted value of the melt viscosity to be controlled.

Claim 8 (Previously Presented): The production process according to claim 7, wherein the relational expression is a relational expression of a linear model, double logarithm model or semilogarithm model, which is obtained by conducting ring-opening polymerization with the overall proton concentration in the cyclic ester varied, using, as a database, measured results of the melt viscosity of aliphatic polyesters obtained by the ring-opening polymerization of the cyclic esters of the respective overall proton concentrations, and subjecting the database to regression analysis.

Claim 9 (Original): The production process according to claim 8, wherein the relational expression is a relational expression of a semilogarithm model represented by the following expression (1), in which the overall proton concentration x in the cyclic ester is used as an independent variable, and the melt viscosity y is used as a dependent variable,

$$y = a \cdot b^{x} \qquad (1)$$

wherein, a and b are parameters.

Claim 10 (Previously Presented): The production process according to claim 1, wherein water is added to the purified cyclic ester to control the overall proton concentration in the cyclic ester, the cyclic ester is heated and melted in the presence of the ring-opening polymerization catalyst, and the cyclic ester in the molten state is then subjected to ring-opening polymerization to deposit a polymer formed.

Claim 11 (Previously Presented): The production process according to claim 1, wherein water is added to the purified cyclic ester to control the overall proton concentration in the cyclic ester, the cyclic ester is heated and melted in the presence of the ring-opening polymerization catalyst in a melting vessel, the cyclic ester in the molten state is transferred to a polymerization equipment with a plurality of tubes capable of being closed and opened at their both ends, and the cyclic ester is then subjected to ring-opening polymerization in the closed state in the respective tubes to deposit a polymer formed.

Claim 12 (Previously Presented): The production process according to claim 1, wherein water is added to the purified cyclic ester to control the overall proton concentration in

the cyclic ester, the cyclic ester is heated and melted in the presence of the ring-opening polymerization catalyst in a melting vessel, the ring-opening polymerization of the cyclic ester in the molten state is allowed to progress in a reaction vessel equipped with a stirrer, a polymer formed is taken out, the polymer is cooled and solidified once, and solid phase polymerization is then continued at a temperature lower than the melting point of the polymer.

Claim 13 (Original): The production process according to claim 1, wherein the cyclic ester is a cyclic diester of an α-hydroxycarboxylic acid, or a lactone.

Claim 14 (Previously Presented): The production process according to claim 13, wherein the cyclic diester of the α-hydroxycarboxylic acid is glycolide or lactide.

Claim 15 (Original): The production process according to claim 1, wherein the cyclic ester is glycolide alone or a mixture of at least 60 % by weight of glycolide and at most 40 % by weight of another cyclic monomer ring-opening-copolymerizable with glycolide.

Claim 16 (Previously Presented): The production process according to claim 15, wherein the another cyclic monomer is lactide.

Claim 17 (Cancelled).

Claim 18 (Original): The production process according to claim 15, which obtains polyglycolic acid having a weight average molecular weight of at least 50,000.

Claim 19 (Original): The production process according to claim 15, which obtains polyglycolic acid having a yellowness index of 4 to 20.

Claim 20 (Original): The production process according to claim 15, which obtains polyglycolic acid having a weight average molecular weight of at most 200,000 and a yellowness index of at most 10.

Claim 21 (Previously Presented): The production process according to claim 1, which comprises adding water to the cyclic ester to control the overall proton concentration in the cyclic ester, thereby further controlling molecular weight of the resulting aliphatic polyester.

Claim 22 (Previously Presented): The production process according to claim 1, which comprises adding water to the cyclic ester to control the overall proton concentration in the cyclic ester, thereby further controlling yellowness index of the resulting aliphatic polyester.

Claim 23 (Previously Presented): The production process of claim 1, wherein the ring-opening polymerization catalyst comprises an oxide, chloride, carboxylate or alkoxide of tin, titanium, aluminum, antimony, zirconium or zinc.

Claim 24 (Currently Amended): A process for producing a polyglycolic acid polyester by subjecting a glycolide cyclic ester to bulk ring-opening polymerization, which comprises

i) providing a glycolide cyclic ester purified to the extent that a water content is at most 50 ppm, an α-hydroxycarboxylic acid content is at most 100 ppm, and linear α-hydroxycarboxylic acid oligomers content is at most 1,000 ppm,

ii) controlling an overall proton concentration in a ring-opening polymerization system by adding a molecular weight control agent consisting of water to the glycolide cyclic ester to control the overall proton concentration in the glycolide cyclic ester to be within a range of higher than 0.09 mol% but lower than 2.0 mol%, wherein the overall proton concentration in the glycolide cyclic ester is calculated out on the basis of the total amount of hydroxycarboxylic compounds consisting of the α-hydroxycarboxylic acid and the linear α-hydroxycarboxylic acid oligomers as impurities in the glycolide cyclic ester, water contained as impurities in the glycolide cyclic ester, and water added to the glycolide cyclic ester, and

iii) subjecting the glycolide cyclic ester to ring opening polymerization in the closed state and in the presence of a ring-opening polymerization catalyst,

thereby controlling melt viscosity of the resulting polyglycolic acid polyester, wherein the resulting polyglycolic acid polyester has a melt viscosity of 50 to 6000 Pa·s as measured at a temperature of 240°C and a shear rate of 121 sec^{-1}.

Claim 25 (Previously Presented): The production process of claim 24, wherein the ring-opening polymerization catalyst comprises an oxide, chloride, carboxylate or alkoxide of tin, titanium, aluminum, antimony, zirconium or zinc.